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HEREDITY AND EDUCATION;

THEIR RELATION TO EACH OTHER, AND
TO THE HUMAN RACE.



PRESIDENT E. A. WOOD'S

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HEREDITY AND EDUCATION;

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ADDRESS BY

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There are many reasons why the physician should be found among the leaders of human progress. Chief among them is the high culture possessed by the true scientific medical man, for science ever tends to bring to the front the best men and measures. His intimate and peculiar relations to society also fit him for the work of bringing before the public whatever is latest and best in the science of life.

This enlargement of the physician's sphere is of modern date; indeed his duties are but widening in this direction, for even yet the whole profession is not awake to the living truth that the medical practitioner's office does not begin and end with administering drugs and collecting fees.

Who is better qualified than the learned physician for disabusing the popular mind of errors, or who can speak with more authority on problems affecting life and health? But a few years ago the belief in Providence as the cause of disease and premature death was well nigh universal. Many physicians shared in that fallacy, and I am not sure but that doctors may be found who still cling to the exploded superstition. Under this baneful delusion no other cause was thought possible and none was sought. While hope and faith sat crooning over the ashes of despair, the scientist went to work, as he only can work, and demonstrated beyond cavil or dispute that the scourges which afflict mankind, and carry off one-half our race before reaching manhood and womanhood, are human crimes, and crimes which are largely preventable. While the stricken mother with her dead child in her arms, raised her tear-dimmed eyes to heaven and kissed the hand that, as she was taught, smote her heart, our Kochs and Pasteurs were at work revealing the truth that it is not God, but man who strikes the cruel blow.

Who more effectively than the physician can demonstrate that children will likely inherit not only their parents form and features, but their vices, and crimes, and diseases as well; that the child begotten of an intoxicated father will, if it survives, turn out bad—will become a drunkard, or criminal, or epileptic, or lunatic. Such a truth, authoritatively proclaimed, tends to make men shun drunkenness as they would the plague.

The physician carries the result of sanitary investigations into our homes to make them healthier and happier. He invades the school house, and teaches that the children need plenty of pure air and sunlight, and that they require not less than four hours active bodily exercise every day. He visits the prisons and asylums, and the filth and pestilence of the old-time dungeons vanish. He has ventured into your legislative halls, and with the courage and constancy that knighted heroes,



combated year in and year out the stubborn prejudice of law-makers, until success crowned his efforts, and as the result you have sanitary laws, which if faithfully executed, will shorten disease and prolong life.

These are some of the extra duties recently shared in by the foremost men in the medical profession. Other kindred duties will follow, for there is enough of wrong and ignorance to tax his highest powers for generations to come.

I desire in this address to direct more intently the attention of the public to a matter closely related to human happiness. My motive, the importance of the subject, and the limited time at my disposal, will, I trust, shield me from unjust criticism.

The subject I respectfully present for your consideration is Heredity and Education—their relation to each other and to the human race. In view of the people I wish to reach, I have striven to be plain, suggestive, and as far as able, popular. My strongest wish is to arouse a curiosity to know more than I tell, and incite my hearers and readers to consult works on the subject, wherein may be found in detail what I here outline.

Heredity is the law by which plants and animals transmit, or tend to transmit, their characteristics to their descendants. It is the old creed, "like begets like," in a better form, reduced to system, and regulated by law. It is a process of evolution in living organisms. As related to the human race, a summary of heredity may be thus stated: Heredity is the most important, ever acting and inevitable force by which man's destiny is determined. Human abilities and disabilities, the permanence of a race or its extinction, virtue and vice, health and disease, and the degree of intelligence, whether it be genius, mediocrity, or idiocy, all depend to a great degree on heredity. By heredity acting through variation, selection, and training, special breeds of animals have been permanently established, and there is no doubt but that by the same process an improved race of men may be secured.

Observation, experience and analogy agree that there was a time in the remote past when man existed only as a savage. By information received the same way we find that, because of their more fortunate environments, certain races merged from the savage state and rose to the plane of civilization. The present status of the world affords examples of every stage of advancement from the lowest savage to the highest civilized. The chief factor in this advancement is heredity. To estimate the immense force of this factor we need but compare the Australian savage or the Digger Indian with the highest civilized European or American. At a rough, but just estimate the civilized man has twenty per cent greater volume of brain than the savage; he has one hundred per cent more gray matter and brain surface than the savage; the civilized man has one thousand per cent more brain power, and all this comes largely from a hereditary force acting through ten thousand years.

We have a still fuller appreciation of the results of heredity when we attempt to raise, by education, the savage to the average of civilized life. Little if any improvement has been made by attempts to civilize the American Indian. Where the effort has been made on the brightest of the race, the success has been sporadic, transient and moderate; the culture always stops at a low point, beyond which no effort can drive it. Their civilization must come, as to other races, by heredity. As a race they have wilted away before contagious civilization like the plant grown in a darkened cellar when suddenly exposed to the scorching rays of a mid-summer sun. The same is true of savage races the world over. A New Zealander, brought to London to be educated, rapidly acquired a few simple rudiments, and there stopped as if struck with imbe-

cility; civilization to him remained an unsealed book. He said of a wealthy man to whom he was introduced: "That man has lots to eat." When we come to understand what heredity is, and what it has done, we are not astonished that the savage tenaciously clings to his fetich.

Now, the fact arrived at from a view of the wide differences in the condition of men, is that some races have learned more than others, and that their acquired wisdom has been saved and permanently transmitted to the race. This is the work of heredity, and if it has done so much in the past, why may it not still further promote civilization. Have we evidence that heredity is still at work, or have we as a race reached the summit of human perfection where heredity can do no more? Let the continuation of the story evolve the answer.

Much attention has been, and is, paid to the breeding of domestic animals. The creatures more especially chosen for improvement are certain species of dogs, horses and cattle. The results, so far, have been astonishingly good. There is perhaps no more instructive or interesting chapter in the history of civilization than man's experience in breeding animals related to him as helpers and companions. The lesson does not end with the study of the brutes, but extends to and involves human destiny.

Galton, in his work on Hereditary Genius, says: "I argue that as a new race can be obtained in animals and plants, and can be raised to so great a degree of purity that it will maintain itself, with moderate care in preventing the more faulty members of the flock from breeding, so a race of gifted men might be obtained under exactly similar conditions."

Man, as savage, barbarian or civilized, is an animal, and subject to the same laws which govern all animals below him. Whatever methods have improved animals, will, if applied to man, also improve him. It is probable that, if the same system as practiced in breeding fine animals were employed in breeding human beings, the result would be as much greater and better as that man is a superior animal. If a selected class of men and women, or if a nation of people of like, but gifted race, were subjected to the same system of breeding as practiced in the case of the American trotting horse, the outcome would surpass the most sanguine expectations. Such a people, after a few generations, would form a distinct and mighty race, as far above their reckless fellow-men as is the Hambletonian horse above the drudge that drags the plow or cart; as far above our present civilization as we are above the Digger Indian.

This is no idle theory unsupported by facts. The ancient Greeks bred men as we now breed fine animals. It is true their system included methods revolting to us, but it must be granted that they reached better results than have been reached since. Their first and highest aim was to develop a strong and heroic race, and they began their work by selecting strong and heroic fathers and mothers as the prime factor in the process. They modeled their men and women as they did their marble, after pure and lofty ideals. They fashioned marble to men and men to marble, and both stand unparalleled in sublime grandeur. Amidst the shadowy chronicles of obscurity, ancient Greek manhood and womanhood stand out as clear as the facades of their temples, as bold as their stately columns and as Jove-like as their inimitable statuary. Greek civilization, and with it the grand race, melted away because the Greeks mixed their blood with inferior races, and gave the world mongrels, with which it remains content.

Galton says: "If it [Athens], had maintained its excellence and spread over large countries, displacing inferior populations, (which it might well have done as it was exceedingly prolific), it would assuredly have accomplished results advantageous to human civilization that transcends our powers of imagination."

The inherent capacity of man has never been fully tested; the inborn greatness of the human race has never been developed in all its breadth and strength. Man's potentiality remains an unknown quantity in the great problem of nature. It is true we occasionally catch glimpses of his glory; the waves of evolution sometimes cast up high on the beach a Socrates, a Shakspeare, a Newton or a Franklin, but the rapid ebbing tide sinks back to the level of a sluggish sea. Man raises high his standard of ideality—as high as the Venus Medici, or Apollo Belvidere of the Greeks, but unlike the Attican he neither plans nor labors to realize his ideality. He has lofty aspirations, plans Utopias that are never built, and in his disappointment and despair comforts himself with the hope of a perfect and immortal life in another world. Another world! This hope, commendable in itself, and in which we are all so prone to share, is a positive hurt, when by its blind indulgence we are distracted from the study and the effort of attaining in this life, and in this world, that perfection which is our birthright.

If such a man as Shakspeare has lived, why may not men as great as he live again? and if one man attained his greatness, why may not the average man? If the old Greeks reached such perfect development, why may not Americans? Is it possible that we have reached the zenith of our possibilities? Is it not rather probable that Shakspeare approximated, but did not attain the possible average of human development? Reason and self pride revolt at the thought that the greatness of the Greeks, of Shakspeare and others, was accidental and dependant on fate. We are rather led to believe that nature, blushing at man's degeneracy and impatient at his supineness, has thrown out here and there along the outskirts of evolution advance pickets, pioneers, marked geniuses, to show us what we might become, and by that, lure us on to become what we might. Nature has written all over her page that Newton and Shakspeare were not accidents, but advance heralds, proclaiming the coming man. No mind can conceive of the latent potentiality of the human race; by right effort continued in the right direction, man may be developed into a being grander than his loftiest ideals, and walk this earth like a god, and not like the frail animal he is.

When pure bred Setter dogs, male and female, are paired, the result is puppies of pure breed and endowed with form, style, instinct and reason peculiar to the breed. But if the pure bred dog is paired with a female of another, especially a coarser breed, the result will be curs, the meanest of all mean dogs. The same is true of all pure bred animals and true of their crossings with inferior stock it requires pure stock to maintain purity of stock. The questions are sometimes asked: Why does it so often happen that great men beget degenerate offspring? Why do great families become extinct? Why did not Shakspeare, and Newton, and Daniel Webster leave sons worthy of such sires? The Greeks answered all these questions when they mixed their blood with inferior races; every cur that bays the moon gives tongue to the answer. If the pure bred Hambletonian horse were paired with the "scrub" mare, the progeny would disgrace the sire, however illustrious he might be, and no sane breeder would raise such a colt. Cross-breeding, breeding between pure and inferior stock, illustrates the whole phenomenon of race degeneracy, and on that subject nothing more need be said.

Anatomists tell us that anatomically perfect men and women are rare. The few living specimens are hired out at big salaries to pose in places of amusement, as Venus rising from the sea, or Ajax fooling with the lightning. Dogs, horses and cattle of certain species are bred so perfect, and so constantly and surely perfect, that imperfect individuals constitute the exception and not the rule.

While it is rare to find a physically perfect man or woman, it is still rarer to find one perfect physically, mentally and morally, that is to say, a perfect human being. It is not likely that any such being exists. There is always some flaw somewhere. If a man has a perfect physique he is a prize fighter, or is marred with some mental or moral blotch.

It will not do to dismiss this part of the subject by concluding that Nature's powers are so limited she exhausts herself in making a man perfect in one particular, and, through impotence, is compelled to leave him bankrupt in other qualities. We might as reasonably conclude that Nature, because she gives one man a sound heart, is unable to bestow on him a sound liver and stomach. And yet if we look about us we might be swayed to believe that Nature is incompetent to make a perfect man, since we find none. We do see stout men with bad morals, weak men with strong minds, moral men with bad stomachs. Intelligence and morality are almost as essential as bodily health, and the reason all three are not more constantly associated in the individual is our own and not Nature's fault. If Nature can give to one man a perfect body, another a perfect brain, and another perfect moral sense, why may she not bestow all three on one individual and show us a perfect man? She can, and would, were it not for one stubborn perversion of her laws. Ignorance makes half-breeds of us all. Herbert Spencer says, truly, "To tens of thousands that are killed, add hundreds of thousands that survive with feeble constitutions, and millions that grow up with constitutions not so strong as they should be, and you will have some idea of the curse inflicted on their offspring, by parents ignorant of the laws of life."

I repeat the question, which sounds more like the interrogatory of despair than a practical inquiry, why may not the higher animal man be bred until he shall have become the paragon of animals, as he egotistically styles himself. He is not the paragon of all animals in every respect. As mere animals the thorough bred and American trotter distance him; as types of animal perfection the pointer and setter challenge his claims to superiority. Man still has his wonderful brain, and his wonderful hands, which, if exercised, will raise him the true monarch of all created things.

Lest there may be cast across these pages too gloomy a shadow of pessimism, let it be written that many races of men have improved, are improving, and bid fair to still further improve; but man has not improved in accord with his powers and opportunities; has not reached the standard of excellence reached over two thousand years ago, and is not improving so rapidly as are the animals domesticated by him.

The first step toward race improvement must be to teach our children that reproduction is the highest and noblest function of the animal. We are losing time by not teaching this lesson, and all implied by it, immediately and thoroughly.

In advocating this proposition, especially its application to human beings, I am keenly alive to the opposition which may be raised, and to the obstacles which stand in the way. Habit and custom, religion, emotion and sentiment, and the passion and unreason which commonly control pairing in the human race, all combine to prevent or defeat the practical application of this principle which is so pregnant with promise to our race. We have raised the individual to sovereignty and debased society to serfdom. We have clothed the individual man with vested rights and the supremacy of the absolute tyrant, while we have suffered the race to be cheated, and robbed, and degraded. We pride ourselves on our ancestry, and regard posterity with contempt. We deify the past, while in our ignorance, born of false modesty, we treat generations unborn as if they were to inhabit some other planet than the earth. Let

us try a change; let us take less pride in ancestry and more in posterity. Let us try for once the experiment of leaving the past to fame, and turn our attention to the study of how children may come into the world with vigorous constitutions, that they may walk, and think, and act better than we. We cannot benefit the past; we may the future. Then let the dead past bury its dead, and let us who are alive live with the living lives that are to live after our lives are past.

It takes only two to make a contract in the matrimonial market. Society, the race, or the state has nothing to do with the case, except to promote all kinds of matches. If two persons of opposite sex, but of notoriously bad health or morals, choose to marry, and inflict society with their ill-starred brood, the state has no right to prevent. Indeed the state not only sanctions such marriages, but aids and encourages marriages between notorious criminals undergoing sentence for the commission of crime, and thereby insures the propagation of the very worst specimens of humanity. It is a serious question, growing more and more serious every year, whether or not the state should prevent or destroy the breeding power of a certain class of insane and habitual (constitutional) criminals. Society and the race have weightier claims than individuals, especially such individuals as are dangerous or have outlawed all claims to the regard of their fellow men; and if race improvement is to come it must come by preventing the propagation of bad and faulty individuals.

Far be it from me to detract from the broad spirit of philanthropy which prompts the state to afford an asylum to the insane and criminal classes; they cannot be treated too well, unless it is to be restored so well as to be able to perpetuate their kind.

Society can and does protect itself against deadly beasts and venomous reptiles. There are human beings among us more dangerous than tigers or rattlesnakes. As Schiller writes :

" 'Tis dangerous to rouse the lion,
Deadly to cross the tiger's path,
But the most terrible of all terrors,
Is man himself in his wild wrath."

Hundreds of dollars are freely donated by communities in this land to send to Paris for treatment persons bitten by dogs supposed to be mad. That is, to cure or prevent the poison of rabies from producing hydrophobia. There are lurking poisons in the veins of some men more deadly, because more latent and wide-spread their havoc on the race, than hydrophobia. No offspring is tainted by rabies, but hereditary crime, disease and insanity infect children unborn and spread a leaven of degeneracy throughout a nation of people. This kind of venom the state seems to have no right to prevent or destroy. The ancient Greeks arose up in their might and exterminated the individual who stood in the way of race improvement. With them the individual had no rights the race was bound to respect.

We have reversed the rule; we practically decree that the race has no rights which the individual is bound to respect, and at a cost fearful to contemplate. By "a venerable and amiable superstition," we hold to the doctrine that the only thing about a man worthy of being cared for is his soul, and that the body is little more worthy of our consideration than the dust from whence it sprung. We treat dumb animals better than ourselves. The breeder controls the destiny of domestic animals with the result of steady improvement, but alas there is no such management for the animal man, and the animal first of all where improvement is of transcendent importance. Can it be possible that a body scarred with vice and crime, and polluted with disease, will contain as pure and grand a soul as the body perfect and strong in all its parts, as a man should be?

I tell you the casket may be so weak and worn as to tarnish or ruin the jewel. The way, and the only way, to evangelize the world is to force on it the evangel of humanity. To make men better you must improve the race.

A young couple, called lovers, are mutually attracted, become engaged, are married, and children follow, but not always to bless parents or society. Whimsical passion, the fancy for a handsome face or form, the seduction of fine clothes or address, the craze for wealth and social position, and a score of other caprices as frivolous, conduce to many, very many, marriages, with the chances largely in favor of degenerate offspring. Reason is unheeded, and judgment is as blind as the god of love. There is no manager by to protect society, or guard the ill-mated pair against themselves. There is no mentor at hand to say: "Beware, young man, beware! Your lady-love belongs to a family wherein drunkenness, or epilepsy, or insanity has long been rife! Look to it! She will taint your children; she cannot escape her hereditary destiny. Young woman, beware! The man you love and to whom you are tempted to pledge your troth-plight, comes of a breed of consumptives; or he himself carries in his blood a poison that will break out in his children, and if his children are yours, break your heart.

"In place of giving away to sympathetic emotions," says M. Sedillot, "which disorder the judgment, let one put himself the question, on seeing a person that pleases him, if he wants sons and daughters of that same type, and it is curious to note how often the reply will be in the negative."

To know ourselves, not only as individuals, but to know our race, know its demands, know where it is weak and how it may be made strong, is by far the most important of all knowledge. Ignorance of the laws of life, ignorance of our duty, and how best to perform it, is the cause of nine-tenths of all our woe. Go ask that father, aged and broken in an hour he never should have seen, ask him the cause of his distress. He had children on whom he looked with hope and pride. Ill-fortune like a cyclone burst on his home, and one son fills a drunkards grave, the mad-house is the living tomb of another, one fled from the penalty of his crime, and thus was scattered to the winds his hope and pride. Ungrateful children caused all this, he indignantly exclaims. Go to the stricken mother, bowed down with grief over brood gone wrong, her family shattered by crime and disease. It is a punishment on me, she meekly sobs; and she suffers on in her Spartan-like faith, nearer the truth than the indignant father. Children gone wrong, as a rule, is the sequence of ancestry gone wrong, and the careful searcher after truth will trace the wrong back, it may be for generations, and fasten the *thou art the man!* on a bad ancestor. Often and often we have less than we think to be proud of in our ancestors.

What is the relation between Heredity and Education? Heredity transmits; education disciplines. Heredity transmits the gains made in one generation to the next, while education improves on those gains and passes them forward to be made permanent to the race by heredity. Heredity is the stock in trade, education the gains to be added to the original stock; or, heredity is the money in bank, education the interest which is turned back into the bank to swell the original amount. If heredity and education were allowed full sway in the right direction, and in the direction they are inclined to take, they would increase the stock of human superiority as rapidly and enormously as money kept at compound interest. Heredity and education are correlative forces, the one adding and the other saving, and thus the twin forces labor hand in hand through the ages.

The best heredity is that which transmits a harmonious and symmetrical being, and that is the best education which develops and organizes the human being in all its normal proportions.

There is very much at stake in comprehending at the very outset the true nature of heredity and education, and their reciprocal relations. From ignorance on this point many blunders are being constantly committed. To the want of proper understanding on this point must be attributed the present craze in relation to the aim, scope and methods of education. The case looks well nigh hopeless when we find so many educators and school authorities sharing in the educational delusion now epidemic.

That education is the best which develops and disciplines all the faculties in due proportion, giving undue prominence to none. The noblest results of a good education will be seen in that class the members of which possess a more or less perfect physical, mental and moral nature. Results not so good will be had where an individual is deficient in one or the other attribute. The worst results will obtain where there is faulty organization and faulty educational methods. The education a thief gets makes him shrewder, not better. Education will not make athletes out of cripples or the weakly, or scholars out of idiots, or moral men out of children void of the moral sense (faculty). In brief, the limit of education is determined by the hereditary trait of the individual. If this is true, and there can be no doubt of its truth, then heredity has more to do in shaping a person's destiny than education. Some persons will not acquire the habit of dram drinking be they ever so much exposed to temptation, others cannot keep away from strong drink much as they may fight to avoid it. This difference is in their heredity. Some persons will acquire wisdom and culture with little or no schooling, just as others will not, although forced into school for years. Here, again, heredity plays the parts. If heredity has more to do with human destiny than education, then more attention should be paid to breeding sound children, and less to their education. If the heredity is good, then the education which follows will be many times easier, and incomparably more efficient, than if the heredity is left to chance. It were impossible to educate the savage, as is educated the Anglo-Saxon child; the former has little stock in trade; heredity did very little for him.

But, in order to try our case plainly, let us start a hypothetical school of a thousand native children as we find them here in this enlightened city of Williamsport. Let us provide for them the best instruction, and the ablest instructors. From the very start it will be evident that there is a wide difference in the aptitude of the pupils for acquiring knowledge and discipline, a difference which will grow more marked until the completion of their education. Now, this difference will be found, not in the willingness or unwillingness of the pupils, but in the hereditary traits of the children, individually considered.

In this school will be found one pupil who will learn as if by intuition, and from the start take and maintain the highest place of honor, not by special effort, but because of his inherited genius; *his ancestors studied for him*. There will likely be found a score or two of bright children, not so brilliant as the genius, but leaders above the average. They will have little trouble in keeping in the lead, because of their inherited talent; *their ancestors did much for them*. In this school may be found one unfortunate, who will not learn, he is a born idiot. Poor child! His parents eat sour grapes, and his teeth are on edge. There will likely be a score or two of dunces, always lagging behind their fellows. Be patient with them, even as they are stupidly patient, their dullness is inherited. Among the thousand will be found nine hundred,

who by close application will advance moderately well, and at the close of school life will be able to perform the duties of the average citizen with credit and success. Education does the most for this class; and that system or method of schooling will be most efficient that is based on the capabilities of the average children; but, mark you, no schooling or education will exalt the average class to the rank of talent, much less of genius, any more than you can raise the dullard to the average rank. High intellectual attainment is not in mediocrity, and no system or amount of education will put it there.

The popular notion, evidently shared by some educators, is something like the following: The mind of a child is an empty receptacle into which may be poured all kinds and quantities of knowledge, and intelligence is a unit of constantly invariable power. If this were true, then equal amounts of knowledge could be poured into every young head, and equal values given to every unit. By this pernicious theory, or one akin to it, comes the high pressure system of schooling, aptly called "cramming." By this system our schools are made brain factories, run by routine, and our teachers machines, our pupils raw material, the one to grind and the other to be ground in the educational mill.

In our hypothetical school we have five classes, the idiot, the dunce, the average, the talented and the genius. Schooling does very little for the idiot; it really does very little for the genius, for he would learn without a school and in spite of a bad school. For him nature and society constitute a vast school, and the objects and actions around him the teachers. He "finds tongues in trees, books in the running brooks, sermons in stones and good in everything." Shut him in remote mountain fastnesses, his manhood, like the wild mountain torrent, will burst through all barriers and rush to the plain to deluge the earth with the flood of his genius. Look at the case of D'Alambert, found a waif on the streets of Paris, apprenticed to a humble glazier, ridiculed by his foster-mother, the glazier's wife, derided by his teachers, and taunted by his school fellows, his genius bore him along like a swift-winged fate, until, at the age of twenty-four he was the talk of Europe. It was subsequently learned how he came by his genius, his parents were found and proved to be very eminent people.

It was genius that gave the world Homer, Socrates, Phidias, Shakspeare, Bonaparte, and it was not education. Genius is inborn and inbred, on which schooling has little influence, unless it is to smother and cripple. If Homer or Shakspeare had been impounded in schools like our modern schools, where, for ten months in the year, for ten or twelve years, they were compelled to recite six hours a day, and pore over six or eight branches of study for four hours or more at home, their genius would not likely have thrilled the world. They might have escaped by playing truant, a not uncommon means of self preservation among bright boys, who afterward made their mark in the world.

The force system now in vogue, the long hours and many branches, the plan of cramming much and varied knowledge without special aim, breaks down health, destroys individuality and puts manacles on the natural bent of youthful minds. While it smothers the fires of genius and talent, and surfeits mediocrity, it makes dunces duller and idiocy more hopeless. Our modern system of schooling (it is not education), turns out scholars as much alike as blue damson plums grown on the same tree.

When a special set of muscles or a special system of the animal economy is developed, while others are inactive, the former will improve while the latter will degenerate. The prize fighter bends all his efforts to develop muscle, and neglects his mind and morals. A person of superior mental

force bends all his efforts to develop brain, and neglects muscle. Education in both cases is bad in method and results, and it is hard to say whether the prize fighter's or the scholar's plan is the worse. Big heads and thin legs, big legs and small heads, strong brains and weak stomachs, and vice versa, are legacies of educational methods, and fatal steps leading to the extinction of American manhood. The present system of schooling will intensify, and heredity confirm in the race, this degeneration already begun. It won't do to develop even so good an organ as the brain at the cost of muscle. Austere morality and sanctified piety may rob a man of his manhood. The true man is the one with mind, body and morals symmetrically proportioned, and the true education is their harmonious development.

The object aimed at in modern schooling is to develop mind, and parents send their children to school for that exclusive purpose. With the question of success left out, this craze will eventually be held as the chief folly of the age. Who are to-day the foremost men in our cities in business and in the professions? Men who came from the country with strong muscles, brains clear but not highly cultured, and morals smelling of the clover fields they left behind. Who are the men that are or have been eminent leaders in the world, and what is it that fits them for leadership? The correct answer to this question ought to be our chart and compass in shaping our system of schooling. What then is the best plan to school your boy or girl for success in life? We have the facts before us by which we can give a true and correct answer.

Galton, in England, and De Condolle, in France, recently undertook, independently of each other, to collect and arrange in categories the traits and training of men who are or have been eminent in their special departments. The result of their labors are now made known and are not more remarkable for their agreement than for the astounding lessons they teach. Perhaps the most important lesson taught is that good health stands first and foremost in all. Here is the gamut of greatness, "*energy of body and mind, good health, great independence of character, tenacity of purpose, practical business habits.*"

This is the answer from the mouths of the eminent men themselves, and surely they should know what makes them strong. Does the system of education, as practiced in the public schools of this state, produce such results as the above? Do our children get energy of body and mind, good health, great independence of character, tenacity of purpose, and practical business habits? Let us still be more precise; granted that these foregoing traits are hereditary, and not the result of education, then does our school system tend to develop them? This question is worthy of a correct and plain answer, and should be yes or no. State schools should be the best; is our system the best? No quibbling, gentlemen of the central boards, let your answer be yes or no. What answer does reason give?

Education has come to mean supplying and receiving much and varied knowledge in schools. Education got in any other way or place would be hooted at. Some of the brightest and most successful business men in this city would blush to tell that they got their education in obscure country school-houses, and yet they don't blush to beat the college graduate. If a man is highly cultured, it don't count if he did not obtain it inside a college, and the more imposing the college building, the greater the display of professors, and the further away from home the college, the better for the happy alumni, and the worse for the modest man of self-culture. If education is spoken of as mental discipline, the meaning is not apparent to the average mind. Supplying much and varied knowledge, taxing the memory with a mass of in-

formation, is one thing, and the thing in which our schools are brilliantly successful; but organizing that knowledge, and disciplining the mind that it may digest and assimilate that information, is another thing. and, unfortunately, the very thing which is almost utterly neglected in our schools. If children learn to think, which sometimes happens, they learn outside of the schoolhouse. There is no time to think in a place where the memory is incessantly storing up knowledge, like a young robin gulping worms.

The most appalling results of our faulty system of schooling are yet to be named. Children whose nervous systems are so highly and exclusively developed must suffer in health and vigor. There is no escape from this doom if we persist in our present course. The results are still more dreadful to contemplate when we remember that heredity is saving every bad impression, and will surely transmit them intensified to the coming generation. These highly strung nervous systems imparted to your children by the schooling now fashionable, nervous systems pitched to the highest key of the living diapason, nervous systems out of tune with bodily harmony, will be transmitted to their children. That is, if they have offspring, for as sure as effect follows cause such faulty development tends to deterioration, and ultimate extinction of the race. It is sad to believe that America is not for Americans.

The effect of severe and exclusive mental application is bad enough for boys, but it is still worse for girls. There are few girls who can stand severe and continuous mental strain between the years of twelve and sixteen without serious detriment to health and vigor, and the loss at that time is never made up to her. During that critical period the budding womanhood demands all the very highest vital energies to fit her for that highest and noblest of all functions, Maternity. Rob her of her vigor at that time, by diverting the vital processes to the brain, and you rob her of health, and probably the proud honor of becoming a mother.

If there is one being in this wide world worthy of man's special homage that being is the healthy mother of healthy children, and the more children the greater the homage. Chivalry and good taste alike prompt the gentleman to remove his hat in the presence of a woman who is proud to be a mother, and who is able and not ashamed to nurse her child at her own breast. It would be more gallant to tip your hat to her than to the flat-breasted, padded piece of millinery and leader of fashion, cultured to affectation, wise in novels and society scandal, and whose dainty nose turns up in disdain at vulgar maternity. Thanks to heredity, she is not likely to become vulgar, for nature has set her eternal seal of barrenness on her kind. And yet, pity her; she is the product of this age of high brain culture. High schooling in her case, as in thousands and thousands in this land, spoiled what might otherwise have been a normal woman, a contented wife and a happy mother.

Venerate your ancestors, sing peans to your forefathers, but in the name of all that is dear and sacred have a regard for the generation that is to take your children's place. Don't add to their stock of woe, don't increase their maladies, don't transmit to them more of neuralgies, and palsies, and lunacies. Train the mind less and the body more. Ask for reform in school methods; if you are not granted that, then take away your children from where molten knowledge is poured scorching into their plastic brains. Better, far better, let your children run among the green fields where they may gather pansies and hear the lark sing, than that they should be stunted in growth, tainted in health, or perhaps sink into untimely graves over studies enough to drive Herbert Spencer mad.

Education, true education, needs no enconium, and I shall bestow none. A system of public instruction under state control which shall develop and discipline our youth into healthful, intelligent and moral citizens, commends itself alike to reason and to patriotism. But when educational methods are founded on error, and in effect are destructive instead of constructive; when our public schools are turned into hot-beds to force brain culture out of all proportion to the bodily vigor; when the mind is cultivated exclusively and the morals are suffered to grow up among weeds as best they may; when posterity is threatened and the American type of manhood and womanhood draws nigh the peril of extinction, then the time is come for the medical profession to sound the tocsin of alarm.

